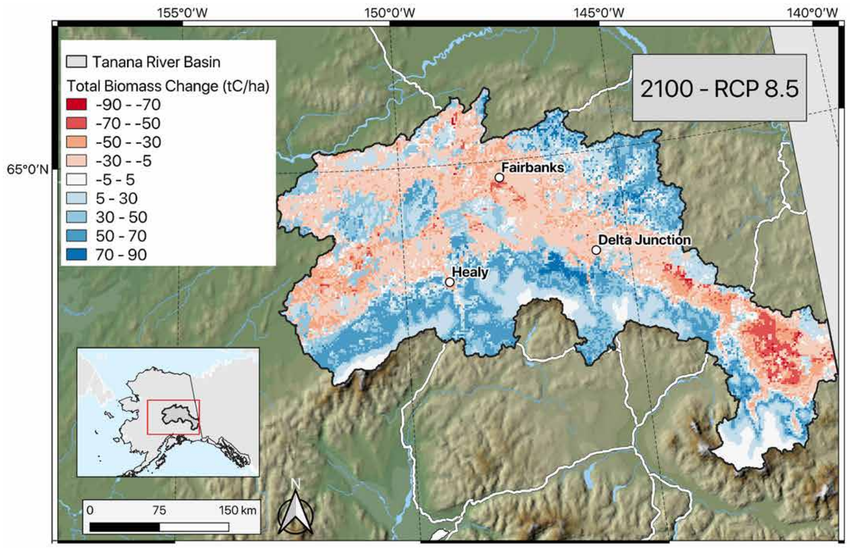
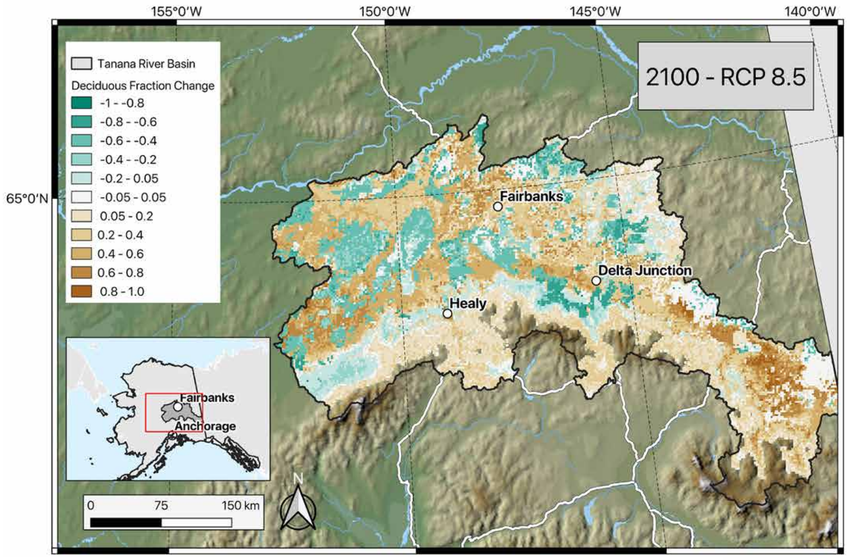
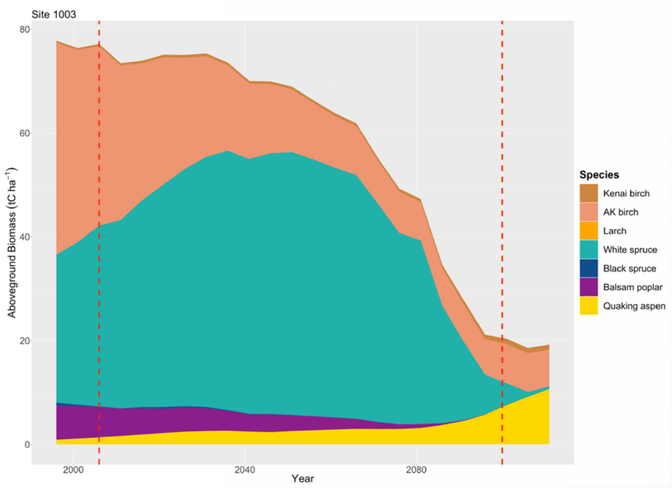




These maps show model predictions of climate change's effects on Alaska Tanana River Basin vegetation in the year 2100. The top map depicts forest biomass (in tonnes of carbon per hectare), with dark red indicating large decreases and dark blue indicating large increases. The bottom map depicts deciduous fraction (percent of biomass that is deciduous species), with dark brown indicating strong increases and dark teal green indicating strong decreases. *Adrianna Foster, Scott Goetz, Northern Arizona University*



This graph shows model-predicted change in species-specific biomass over time for a single location within interior Alaska. Red dashed lines indicate the period of climate change. Model output at this location shows a decline in biomass and a shift in the overall species composition. Scientists used the UVAFME model to simulate such changes at thousands of locations like this one to produce the maps seen above. *Adrianna Foster, Scott Goetz, Northern Arizona University*

National Aeronautics and Space Administration

Fine-Scale Forest Modeling Across the North American Boreal Zone

The North American boreal forest is highly influenced by complex interactions between vegetation, wildfire, soil conditions, and climate. Climate change is occurring faster in this region than anywhere else on Earth and is likely to impact all of these interactions, ultimately leading to changes in vegetation composition and structure. High-resolution forest modeling can aid in simulating potential changes by considering these important vegetation drivers at a fine scale. Researchers applied a fine-scale forest model (UVAFME) across a large region within interior Alaska; the model predicted overall declining forest biomass and increasing deciduous forest cover across the region.

Adrianna Foster, Northern Arizona University
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